Name: Date:

s17 Geometric Series Exam (EXAM v300)

Question 1

Consider the partial geometric series represented below with first term $a = 950$, common ratio $r = \left(\frac{78}{95}\right)^{1/10}$, and $n = 10$ terms.

$$S = 950 + 931.45 + 913.27 + 895.44 + 877.95 + 860.81 + 844.01 + 827.53 + 811.37 + 795.53$$

We can multiply both sides by r.

$$rS = 931.45 + 913.27 + 895.44 + 877.95 + 860.81 + 844.01 + 827.53 + 811.37 + 795.53 + 780$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(5) + 6(5)^2 + 6(5)^3 + \cdots + 6(5)^{84} + 6(5)^{85} + 6(5)^{86} + 6(5)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v301)

Question 1

Consider the partial geometric series represented below with first term $a = 360$, common ratio $r = \left(\frac{2}{3}\right)^{1/10}$, and $n = 10$ terms.

$$S \;=\; 360 + 345.7 + 331.96 + 318.77 + 306.1 + 293.94 + 282.26 + 271.04 + 260.27 + 249.93$$

We can multiply both sides by r.

$$rS \;=\; 345.7 + 331.96 + 318.77 + 306.1 + 293.94 + 282.26 + 271.04 + 260.27 + 249.93 + 240$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S \;=\; 2 \;+\; 2(6) \;+\; 2(6)^2 \;+\; 2(6)^3 \;+\; \cdots \;+\; 2(6)^{92} \;+\; 2(6)^{93} \;+\; 2(6)^{94} \;+\; 2(6)^{95}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v302)

Question 1

Consider the partial geometric series represented below with first term $a = 435$, common ratio $r = \left(\frac{17}{29}\right)^{1/10}$, and $n = 10$ terms.

$$S = 435 + 412.38 + 390.93 + 370.6 + 351.33 + 333.05 + 315.73 + 299.31 + 283.75 + 268.99$$

We can multiply both sides by r.

$$rS = 412.38 + 390.93 + 370.6 + 351.33 + 333.05 + 315.73 + 299.31 + 283.75 + 268.99 + 255$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(3) + 7(3)^2 + 7(3)^3 + \cdots + 7(3)^{69} + 7(3)^{70} + 7(3)^{71} + 7(3)^{72}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v303)

Question 1

Consider the partial geometric series represented below with first term $a = 795$, common ratio $r = \left(\frac{2}{5}\right)^{1/10}$, and $n = 10$ terms.

$$S = 795 + 725.39 + 661.88 + 603.93 + 551.05 + 502.8 + 458.78 + 418.61 + 381.96 + 348.51$$

We can multiply both sides by r.

$$rS = 725.39 + 661.88 + 603.93 + 551.05 + 502.8 + 458.78 + 418.61 + 381.96 + 348.51 + 318$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(8) + 7(8)^2 + 7(8)^3 + \cdots + 7(8)^{67} + 7(8)^{68} + 7(8)^{69} + 7(8)^{70}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v304)

Question 1

Consider the partial geometric series represented below with first term $a = 553$, common ratio $r = \left(\frac{44}{79}\right)^{1/10}$, and $n = 10$ terms.

$$S = 553 + 521.56 + 491.92 + 463.95 + 437.58 + 412.7 + 389.24 + 367.12 + 346.25 + 326.56$$

We can multiply both sides by r.

$$rS = 521.56 + 491.92 + 463.95 + 437.58 + 412.7 + 389.24 + 367.12 + 346.25 + 326.56 + 308$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(4) + 3(4)^2 + 3(4)^3 + \cdots + 3(4)^{70} + 3(4)^{71} + 3(4)^{72} + 3(4)^{73}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v305)

Question 1

Consider the partial geometric series represented below with first term $a = 741$, common ratio $r = \left(\frac{8}{39}\right)^{1/10}$, and $n = 10$ terms.

$$S = 741 + 632.44 + 539.79 + 460.71 + 393.21 + 335.61 + 286.44 + 244.48 + 208.66 + 178.09$$

We can multiply both sides by r.

$$rS = 632.44 + 539.79 + 460.71 + 393.21 + 335.61 + 286.44 + 244.48 + 208.66 + 178.09 + 152$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(4) + 6(4)^2 + 6(4)^3 + \cdots + 6(4)^{77} + 6(4)^{78} + 6(4)^{79} + 6(4)^{80}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v306)

Question 1

Consider the partial geometric series represented below with first term $a = 492$, common ratio $r = \left(\frac{3}{4}\right)^{1/10}$, and $n = 10$ terms.

$$S = 492 + 478.05 + 464.49 + 451.32 + 438.52 + 426.08 + 414 + 402.26 + 390.85 + 379.77$$

We can multiply both sides by r.

$$rS = 478.05 + 464.49 + 451.32 + 438.52 + 426.08 + 414 + 402.26 + 390.85 + 379.77 + 369$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(4) + 2(4)^2 + 2(4)^3 + \cdots + 2(4)^{47} + 2(4)^{48} + 2(4)^{49} + 2(4)^{50}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v307)

Question 1

Consider the partial geometric series represented below with first term $a = 592$, common ratio $r = \left(\frac{21}{37}\right)^{1/10}$, and $n = 10$ terms.

$$S = 592 + 559.4 + 528.6 + 499.49 + 471.99 + 446 + 421.44 + 398.23 + 376.3 + 355.58$$

We can multiply both sides by r.

$$rS = 559.4 + 528.6 + 499.49 + 471.99 + 446 + 421.44 + 398.23 + 376.3 + 355.58 + 336$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(7) + 2(7)^2 + 2(7)^3 + \cdots + 2(7)^{60} + 2(7)^{61} + 2(7)^{62} + 2(7)^{63}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v308)

Question 1

Consider the partial geometric series represented below with first term $a = 420$, common ratio $r = \left(\frac{2}{5}\right)^{1/10}$, and $n = 10$ terms.

$$S = 420 + 383.23 + 349.67 + 319.06 + 291.12 + 265.63 + 242.37 + 221.15 + 201.79 + 184.12$$

We can multiply both sides by r.

$$rS = 383.23 + 349.67 + 319.06 + 291.12 + 265.63 + 242.37 + 221.15 + 201.79 + 184.12 + 168$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(3) + 4(3)^2 + 4(3)^3 + \cdots + 4(3)^{83} + 4(3)^{84} + 4(3)^{85} + 4(3)^{86}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v309)

Question 1

Consider the partial geometric series represented below with first term $a = 840$, common ratio $r = \left(\frac{33}{40}\right)^{1/10}$, and $n = 10$ terms.

$$S = 840 + 824 + 808.3 + 792.89 + 777.79 + 762.97 + 748.43 + 734.17 + 720.18 + 706.46$$

We can multiply both sides by r.

$$rS = 824 + 808.3 + 792.89 + 777.79 + 762.97 + 748.43 + 734.17 + 720.18 + 706.46 + 693$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(8) + 6(8)^2 + 6(8)^3 + \cdots + 6(8)^{55} + 6(8)^{56} + 6(8)^{57} + 6(8)^{58}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v310)

Question 1

Consider the partial geometric series represented below with first term $a = 440$, common ratio $r = \left(\frac{13}{40}\right)^{1/10}$, and $n = 10$ terms.

$$S = 440 + 393.22 + 351.42 + 314.06 + 280.68 + 250.84 + 224.17 + 200.34 + 179.04 + 160.01$$

We can multiply both sides by r.

$$rS = 393.22 + 351.42 + 314.06 + 280.68 + 250.84 + 224.17 + 200.34 + 179.04 + 160.01 + 143$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(6) + 5(6)^2 + 5(6)^3 + \cdots + 5(6)^{48} + 5(6)^{49} + 5(6)^{50} + 5(6)^{51}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v311)

Question 1

Consider the partial geometric series represented below with first term $a = 848$, common ratio $r = \left(\frac{18}{53}\right)^{1/10}$, and $n = 10$ terms.

$$S = 848 + 761.19 + 683.27 + 613.33 + 550.55 + 494.19 + 443.6 + 398.19 + 357.43 + 320.84$$

We can multiply both sides by r.

$$rS = 761.19 + 683.27 + 613.33 + 550.55 + 494.19 + 443.6 + 398.19 + 357.43 + 320.84 + 288$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(2) + 4(2)^2 + 4(2)^3 + \cdots + 4(2)^{76} + 4(2)^{77} + 4(2)^{78} + 4(2)^{79}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v312)

Question 1

Consider the partial geometric series represented below with first term $a = 918$, common ratio $r = \left(\frac{8}{27}\right)^{1/10}$, and $n = 10$ terms.

$$S = 918 + 812.86 + 719.76 + 637.32 + 564.33 + 499.7 + 442.46 + 391.79 + 346.92 + 307.18$$

We can multiply both sides by r.

$$rS = 812.86 + 719.76 + 637.32 + 564.33 + 499.7 + 442.46 + 391.79 + 346.92 + 307.18 + 272$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(3) + 7(3)^2 + 7(3)^3 + \cdots + 7(3)^{88} + 7(3)^{89} + 7(3)^{90} + 7(3)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v313)

Question 1

Consider the partial geometric series represented below with first term $a = 553$, common ratio $r = \left(\frac{35}{79}\right)^{1/10}$, and $n = 10$ terms.

$$S = 553 + 509.76 + 469.91 + 433.17 + 399.3 + 368.08 + 339.3 + 312.78 + 288.32 + 265.78$$

We can multiply both sides by r.

$$rS = 509.76 + 469.91 + 433.17 + 399.3 + 368.08 + 339.3 + 312.78 + 288.32 + 265.78 + 245$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(5) + 3(5)^2 + 3(5)^3 + \cdots + 3(5)^{49} + 3(5)^{50} + 3(5)^{51} + 3(5)^{52}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v314)

Question 1

Consider the partial geometric series represented below with first term $a = 792$, common ratio $r = \left(\frac{7}{12}\right)^{1/10}$, and $n = 10$ terms.

$$S = 792 + 750.44 + 711.06 + 673.75 + 638.4 + 604.9 + 573.16 + 543.08 + 514.59 + 487.58$$

We can multiply both sides by r.

$$rS = 750.44 + 711.06 + 673.75 + 638.4 + 604.9 + 573.16 + 543.08 + 514.59 + 487.58 + 462$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(6) + 5(6)^2 + 5(6)^3 + \cdots + 5(6)^{88} + 5(6)^{89} + 5(6)^{90} + 5(6)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v315)

Question 1

Consider the partial geometric series represented below with first term $a = 350$, common ratio $r = \left(\frac{31}{70}\right)^{1/10}$, and $n = 10$ terms.

$$S = 350 + 322.62 + 297.39 + 274.12 + 252.68 + 232.92 + 214.7 + 197.9 + 182.42 + 168.15$$

We can multiply both sides by r.

$$rS = 322.62 + 297.39 + 274.12 + 252.68 + 232.92 + 214.7 + 197.9 + 182.42 + 168.15 + 155$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(4) + 2(4)^2 + 2(4)^3 + \cdots + 2(4)^{52} + 2(4)^{53} + 2(4)^{54} + 2(4)^{55}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v316)

Question 1

Consider the partial geometric series represented below with first term $a = 814$, common ratio $r = \left(\frac{11}{74}\right)^{1/10}$, and $n = 10$ terms.

$$S = 814 + 672.73 + 555.98 + 459.49 + 379.74 + 313.84 + 259.37 + 214.36 + 177.15 + 146.41$$

We can multiply both sides by r.

$$rS = 672.73 + 555.98 + 459.49 + 379.74 + 313.84 + 259.37 + 214.36 + 177.15 + 146.41 + 121$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(2) + 7(2)^2 + 7(2)^3 + \cdots + 7(2)^{69} + 7(2)^{70} + 7(2)^{71} + 7(2)^{72}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v317)

Question 1

Consider the partial geometric series represented below with first term $a = 595$, common ratio $r = \left(\frac{56}{85}\right)^{1/10}$, and $n = 10$ terms.

$$S = 595 + 570.68 + 547.36 + 524.99 + 503.53 + 482.95 + 463.21 + 444.28 + 426.12 + 408.7$$

We can multiply both sides by r.

$$rS = 570.68 + 547.36 + 524.99 + 503.53 + 482.95 + 463.21 + 444.28 + 426.12 + 408.7 + 392$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(2) + 3(2)^2 + 3(2)^3 + \cdots + 3(2)^{66} + 3(2)^{67} + 3(2)^{68} + 3(2)^{69}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v318)

Question 1

Consider the partial geometric series represented below with first term $a = 480$, common ratio $r = \left(\frac{1}{2}\right)^{1/10}$, and $n = 10$ terms.

$$S = 480 + 447.86 + 417.86 + 389.88 + 363.77 + 339.41 + 316.68 + 295.47 + 275.69 + 257.23$$

We can multiply both sides by r.

$$rS = 447.86 + 417.86 + 389.88 + 363.77 + 339.41 + 316.68 + 295.47 + 275.69 + 257.23 + 240$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(8) + 4(8)^2 + 4(8)^3 + \cdots + 4(8)^{62} + 4(8)^{63} + 4(8)^{64} + 4(8)^{65}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v319)

Question 1

Consider the partial geometric series represented below with first term $a = 840$, common ratio $r = \left(\frac{1}{7}\right)^{1/10}$, and $n = 10$ terms.

$$S = 840 + 691.46 + 569.19 + 468.54 + 385.69 + 317.49 + 261.35 + 215.13 + 177.09 + 145.78$$

We can multiply both sides by r.

$$rS = 691.46 + 569.19 + 468.54 + 385.69 + 317.49 + 261.35 + 215.13 + 177.09 + 145.78 + 120$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(5) + 7(5)^2 + 7(5)^3 + \cdots + 7(5)^{85} + 7(5)^{86} + 7(5)^{87} + 7(5)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v320)

Question 1

Consider the partial geometric series represented below with first term $a = 855$, common ratio $r = \left(\frac{28}{57}\right)^{1/10}$, and $n = 10$ terms.

$$S = 855 + 796.33 + 741.69 + 690.8 + 643.4 + 599.25 + 558.13 + 519.83 + 484.16 + 450.94$$

We can multiply both sides by r.

$$rS = 796.33 + 741.69 + 690.8 + 643.4 + 599.25 + 558.13 + 519.83 + 484.16 + 450.94 + 420$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(4) + 5(4)^2 + 5(4)^3 + \cdots + 5(4)^{63} + 5(4)^{64} + 5(4)^{65} + 5(4)^{66}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v321)

Question 1

Consider the partial geometric series represented below with first term $a = 819$, common ratio $r = \left(\frac{47}{91}\right)^{1/10}$, and $n = 10$ terms.

$$S = 819 + 766.64 + 717.62 + 671.74 + 628.79 + 588.59 + 550.96 + 515.73 + 482.76 + 451.89$$

We can multiply both sides by r.

$$rS = 766.64 + 717.62 + 671.74 + 628.79 + 588.59 + 550.96 + 515.73 + 482.76 + 451.89 + 423$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(2) + 7(2)^2 + 7(2)^3 + \cdots + 7(2)^{58} + 7(2)^{59} + 7(2)^{60} + 7(2)^{61}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v322)

Question 1

Consider the partial geometric series represented below with first term $a = 714$, common ratio $r = \left(\frac{17}{42}\right)^{1/10}$, and $n = 10$ terms.

$$S = 714 + 652.26 + 595.85 + 544.32 + 497.25 + 454.25 + 414.97 + 379.09 + 346.3 + 316.36$$

We can multiply both sides by r.

$$rS = 652.26 + 595.85 + 544.32 + 497.25 + 454.25 + 414.97 + 379.09 + 346.3 + 316.36 + 289$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(8) + 5(8)^2 + 5(8)^3 + \cdots + 5(8)^{46} + 5(8)^{47} + 5(8)^{48} + 5(8)^{49}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v323)

Question 1

Consider the partial geometric series represented below with first term $a = 531$, common ratio $r = \left(\frac{42}{59}\right)^{1/10}$, and $n = 10$ terms.

$$S = 531 + 513.26 + 496.11 + 479.53 + 463.5 + 448.02 + 433.04 + 418.57 + 404.59 + 391.07$$

We can multiply both sides by r.

$$rS = 513.26 + 496.11 + 479.53 + 463.5 + 448.02 + 433.04 + 418.57 + 404.59 + 391.07 + 378$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(4) + 2(4)^2 + 2(4)^3 + \cdots + 2(4)^{74} + 2(4)^{75} + 2(4)^{76} + 2(4)^{77}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v324)

Question 1

Consider the partial geometric series represented below with first term $a = 532$, common ratio $r = \left(\frac{43}{76}\right)^{1/10}$, and $n = 10$ terms.

$$S = 532 + 502.55 + 474.73 + 448.44 + 423.62 + 400.16 + 378.01 + 357.08 + 337.31 + 318.64$$

We can multiply both sides by r.

$$rS = 502.55 + 474.73 + 448.44 + 423.62 + 400.16 + 378.01 + 357.08 + 337.31 + 318.64 + 301$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(8) + 6(8)^2 + 6(8)^3 + \cdots + 6(8)^{79} + 6(8)^{80} + 6(8)^{81} + 6(8)^{82}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v325)

Question 1

Consider the partial geometric series represented below with first term $a = 845$, common ratio $r = \left(\frac{2}{5}\right)^{1/10}$, and $n = 10$ terms.

$$S = 845 + 771.01 + 703.51 + 641.91 + 585.71 + 534.42 + 487.63 + 444.94 + 405.98 + 370.43$$

We can multiply both sides by r.

$$rS = 771.01 + 703.51 + 641.91 + 585.71 + 534.42 + 487.63 + 444.94 + 405.98 + 370.43 + 338$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(2) + 7(2)^2 + 7(2)^3 + \cdots + 7(2)^{48} + 7(2)^{49} + 7(2)^{50} + 7(2)^{51}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v326)

Question 1

Consider the partial geometric series represented below with first term $a = 864$, common ratio $r = \left(\frac{5}{27}\right)^{1/10}$, and $n = 10$ terms.

$$S = 864 + 729.92 + 616.64 + 520.95 + 440.1 + 371.81 + 314.11 + 265.36 + 224.18 + 189.39$$

We can multiply both sides by r.

$$rS = 729.92 + 616.64 + 520.95 + 440.1 + 371.81 + 314.11 + 265.36 + 224.18 + 189.39 + 160$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(5) + 4(5)^2 + 4(5)^3 + \cdots + 4(5)^{91} + 4(5)^{92} + 4(5)^{93} + 4(5)^{94}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v327)

Question 1

Consider the partial geometric series represented below with first term $a = 312$, common ratio $r = \left(\frac{22}{39}\right)^{1/10}$, and $n = 10$ terms.

$$S = 312 + 294.64 + 278.24 + 262.76 + 248.14 + 234.33 + 221.29 + 208.98 + 197.35 + 186.37$$

We can multiply both sides by r.

$$rS = 294.64 + 278.24 + 262.76 + 248.14 + 234.33 + 221.29 + 208.98 + 197.35 + 186.37 + 176$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(7) + 6(7)^2 + 6(7)^3 + \cdots + 6(7)^{62} + 6(7)^{63} + 6(7)^{64} + 6(7)^{65}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v328)

Question 1

Consider the partial geometric series represented below with first term $a = 435$, common ratio $r = \left(\frac{52}{87}\right)^{1/10}$, and $n = 10$ terms.

$$S = 435 + 413.18 + 392.45 + 372.76 + 354.06 + 336.3 + 319.43 + 303.41 + 288.19 + 273.73$$

We can multiply both sides by r.

$$rS = 413.18 + 392.45 + 372.76 + 354.06 + 336.3 + 319.43 + 303.41 + 288.19 + 273.73 + 260$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(4) + 8(4)^2 + 8(4)^3 + \cdots + 8(4)^{68} + 8(4)^{69} + 8(4)^{70} + 8(4)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v329)

Question 1

Consider the partial geometric series represented below with first term $a = 345$, common ratio $r = \left(\frac{13}{23}\right)^{1/10}$, and $n = 10$ terms.

$$S = 345 + 325.87 + 307.8 + 290.73 + 274.6 + 259.37 + 244.99 + 231.4 + 218.57 + 206.45$$

We can multiply both sides by r.

$$rS = 325.87 + 307.8 + 290.73 + 274.6 + 259.37 + 244.99 + 231.4 + 218.57 + 206.45 + 195$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(5) + 8(5)^2 + 8(5)^3 + \cdots + 8(5)^{48} + 8(5)^{49} + 8(5)^{50} + 8(5)^{51}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v330)

Question 1

Consider the partial geometric series represented below with first term $a = 928$, common ratio $r = \left(\frac{7}{29}\right)^{1/10}$, and $n = 10$ terms.

$$S = 928 + 805.04 + 698.37 + 605.84 + 525.57 + 455.93 + 395.52 + 343.11 + 297.65 + 258.21$$

We can multiply both sides by r.

$$rS = 805.04 + 698.37 + 605.84 + 525.57 + 455.93 + 395.52 + 343.11 + 297.65 + 258.21 + 224$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(2) + 6(2)^2 + 6(2)^3 + \cdots + 6(2)^{68} + 6(2)^{69} + 6(2)^{70} + 6(2)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v331)

Question 1

Consider the partial geometric series represented below with first term $a = 832$, common ratio $r = \left(\frac{5}{13}\right)^{1/10}$, and $n = 10$ terms.

$$S = 832 + 756.18 + 687.27 + 624.64 + 567.72 + 515.98 + 468.96 + 426.23 + 387.39 + 352.08$$

We can multiply both sides by r.

$$rS = 756.18 + 687.27 + 624.64 + 567.72 + 515.98 + 468.96 + 426.23 + 387.39 + 352.08 + 320$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(6) + 7(6)^2 + 7(6)^3 + \cdots + 7(6)^{55} + 7(6)^{56} + 7(6)^{57} + 7(6)^{58}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v332)

Question 1

Consider the partial geometric series represented below with first term $a = 819$, common ratio $r = \left(\frac{22}{91}\right)^{1/10}$, and $n = 10$ terms.

$$S = 819 + 710.59 + 616.54 + 534.93 + 464.13 + 402.69 + 349.39 + 303.15 + 263.02 + 228.21$$

We can multiply both sides by r.

$$rS = 710.59 + 616.54 + 534.93 + 464.13 + 402.69 + 349.39 + 303.15 + 263.02 + 228.21 + 198$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(3) + 6(3)^2 + 6(3)^3 + \cdots + 6(3)^{84} + 6(3)^{85} + 6(3)^{86} + 6(3)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v333)

Question 1

Consider the partial geometric series represented below with first term $a = 864$, common ratio $r = \left(\frac{1}{2}\right)^{1/10}$, and $n = 10$ terms.

$$S = 864 + 806.14 + 752.16 + 701.79 + 654.79 + 610.94 + 570.03 + 531.85 + 496.24 + 463.01$$

We can multiply both sides by r.

$$rS = 806.14 + 752.16 + 701.79 + 654.79 + 610.94 + 570.03 + 531.85 + 496.24 + 463.01 + 432$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(4) + 6(4)^2 + 6(4)^3 + \cdots + 6(4)^{54} + 6(4)^{55} + 6(4)^{56} + 6(4)^{57}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v334)

Question 1

Consider the partial geometric series represented below with first term $a = 261$, common ratio $r = \left(\frac{47}{87}\right)^{1/10}$, and $n = 10$ terms.

$$S = 261 + 245.41 + 230.76 + 216.98 + 204.02 + 191.84 + 180.38 + 169.61 + 159.48 + 149.96$$

We can multiply both sides by r.

$$rS = 245.41 + 230.76 + 216.98 + 204.02 + 191.84 + 180.38 + 169.61 + 159.48 + 149.96 + 141$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(8) + 3(8)^2 + 3(8)^3 + \cdots + 3(8)^{89} + 3(8)^{90} + 3(8)^{91} + 3(8)^{92}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v335)

Question 1

Consider the partial geometric series represented below with first term $a = 970$, common ratio $r = \left(\frac{24}{97}\right)^{1/10}$, and $n = 10$ terms.

$$S = 970 + 843.56 + 733.6 + 637.97 + 554.81 + 482.49 + 419.6 + 364.9 + 317.34 + 275.97$$

We can multiply both sides by r.

$$rS = 843.56 + 733.6 + 637.97 + 554.81 + 482.49 + 419.6 + 364.9 + 317.34 + 275.97 + 240$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(4) + 5(4)^2 + 5(4)^3 + \cdots + 5(4)^{48} + 5(4)^{49} + 5(4)^{50} + 5(4)^{51}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v336)

Question 1

Consider the partial geometric series represented below with first term $a = 320$, common ratio $r = \left(\frac{29}{64}\right)^{1/10}$, and $n = 10$ terms.

$$S = 320 + 295.65 + 273.15 + 252.36 + 233.15 + 215.41 + 199.01 + 183.87 + 169.87 + 156.94$$

We can multiply both sides by r.

$$rS = 295.65 + 273.15 + 252.36 + 233.15 + 215.41 + 199.01 + 183.87 + 169.87 + 156.94 + 145$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(2) + 7(2)^2 + 7(2)^3 + \cdots + 7(2)^{85} + 7(2)^{86} + 7(2)^{87} + 7(2)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v337)

Question 1

Consider the partial geometric series represented below with first term $a = 736$, common ratio $r = \left(\frac{59}{92}\right)^{1/10}$, and $n = 10$ terms.

$$S = 736 + 704.02 + 673.43 + 644.16 + 616.17 + 589.4 + 563.79 + 539.29 + 515.86 + 493.44$$

We can multiply both sides by r.

$$rS = 704.02 + 673.43 + 644.16 + 616.17 + 589.4 + 563.79 + 539.29 + 515.86 + 493.44 + 472$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(8) + 5(8)^2 + 5(8)^3 + \cdots + 5(8)^{88} + 5(8)^{89} + 5(8)^{90} + 5(8)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v338)

Question 1

Consider the partial geometric series represented below with first term $a = 500$, common ratio $r = \left(\frac{11}{25}\right)^{1/10}$, and $n = 10$ terms.

$$S = 500 + 460.59 + 424.29 + 390.85 + 360.04 + 331.66 + 305.52 + 281.44 + 259.26 + 238.82$$

We can multiply both sides by r.

$$rS = 460.59 + 424.29 + 390.85 + 360.04 + 331.66 + 305.52 + 281.44 + 259.26 + 238.82 + 220$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(3) + 7(3)^2 + 7(3)^3 + \cdots + 7(3)^{55} + 7(3)^{56} + 7(3)^{57} + 7(3)^{58}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v339)

Question 1

Consider the partial geometric series represented below with first term $a = 817$, common ratio $r = \left(\frac{16}{19}\right)^{1/10}$, and $n = 10$ terms.

$$S = 817 + 803.08 + 789.4 + 775.95 + 762.73 + 749.73 + 736.96 + 724.4 + 712.06 + 699.93$$

We can multiply both sides by r.

$$rS = 803.08 + 789.4 + 775.95 + 762.73 + 749.73 + 736.96 + 724.4 + 712.06 + 699.93 + 688$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(4) + 7(4)^2 + 7(4)^3 + \cdots + 7(4)^{61} + 7(4)^{62} + 7(4)^{63} + 7(4)^{64}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v340)

Question 1

Consider the partial geometric series represented below with first term $a = 855$, common ratio $r = \left(\frac{67}{95}\right)^{1/10}$, and $n = 10$ terms.

$$S = 855 + 825.66 + 797.33 + 769.97 + 743.54 + 718.03 + 693.39 + 669.59 + 646.62 + 624.43$$

We can multiply both sides by r.

$$rS = 825.66 + 797.33 + 769.97 + 743.54 + 718.03 + 693.39 + 669.59 + 646.62 + 624.43 + 603$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(4) + 3(4)^2 + 3(4)^3 + \cdots + 3(4)^{70} + 3(4)^{71} + 3(4)^{72} + 3(4)^{73}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v341)

Question 1

Consider the partial geometric series represented below with first term $a = 330$, common ratio $r = \left(\frac{32}{55}\right)^{1/10}$, and $n = 10$ terms.

$$S = 330 + 312.6 + 296.12 + 280.51 + 265.72 + 251.71 + 238.44 + 225.87 + 213.97 + 202.69$$

We can multiply both sides by r.

$$rS = 312.6 + 296.12 + 280.51 + 265.72 + 251.71 + 238.44 + 225.87 + 213.97 + 202.69 + 192$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(2) + 8(2)^2 + 8(2)^3 + \cdots + 8(2)^{68} + 8(2)^{69} + 8(2)^{70} + 8(2)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v342)

Question 1

Consider the partial geometric series represented below with first term $a = 415$, common ratio $r = \left(\frac{44}{83}\right)^{1/10}$, and $n = 10$ terms.

$$S = 415 + 389.48 + 365.53 + 343.05 + 321.96 + 302.16 + 283.58 + 266.14 + 249.77 + 234.41$$

We can multiply both sides by r.

$$rS = 389.48 + 365.53 + 343.05 + 321.96 + 302.16 + 283.58 + 266.14 + 249.77 + 234.41 + 220$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(4) + 6(4)^2 + 6(4)^3 + \cdots + 6(4)^{82} + 6(4)^{83} + 6(4)^{84} + 6(4)^{85}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v343)

Question 1

Consider the partial geometric series represented below with first term $a = 893$, common ratio $r = \left(\frac{22}{47}\right)^{1/10}$, and $n = 10$ terms.

$$S = 893 + 827.72 + 767.21 + 711.13 + 659.15 + 610.96 + 566.3 + 524.9 + 486.53 + 450.97$$

We can multiply both sides by r.

$$rS = 827.72 + 767.21 + 711.13 + 659.15 + 610.96 + 566.3 + 524.9 + 486.53 + 450.97 + 418$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(3) + 4(3)^2 + 4(3)^3 + \cdots + 4(3)^{59} + 4(3)^{60} + 4(3)^{61} + 4(3)^{62}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v344)

Question 1

Consider the partial geometric series represented below with first term $a = 742$, common ratio $r = \left(\frac{4}{7}\right)^{1/10}$, and $n = 10$ terms.

$$S = 742 + 701.62 + 663.43 + 627.32 + 593.18 + 560.9 + 530.37 + 501.51 + 474.21 + 448.4$$

We can multiply both sides by r.

$$rS = 701.62 + 663.43 + 627.32 + 593.18 + 560.9 + 530.37 + 501.51 + 474.21 + 448.4 + 424$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(7) + 2(7)^2 + 2(7)^3 + \cdots + 2(7)^{84} + 2(7)^{85} + 2(7)^{86} + 2(7)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v345)

Question 1

Consider the partial geometric series represented below with first term $a = 846$, common ratio $r = \left(\frac{27}{94}\right)^{1/10}$, and $n = 10$ terms.

$$S = 846 + 746.78 + 659.2 + 581.89 + 513.65 + 453.41 + 400.23 + 353.29 + 311.86 + 275.29$$

We can multiply both sides by r.

$$rS = 746.78 + 659.2 + 581.89 + 513.65 + 453.41 + 400.23 + 353.29 + 311.86 + 275.29 + 243$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(4) + 8(4)^2 + 8(4)^3 + \cdots + 8(4)^{72} + 8(4)^{73} + 8(4)^{74} + 8(4)^{75}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v346)

Question 1

Consider the partial geometric series represented below with first term $a = 775$, common ratio $r = \left(\frac{4}{31}\right)^{1/10}$, and $n = 10$ terms.

$$S = 775 + 631.5 + 514.57 + 419.29 + 341.65 + 278.39 + 226.84 + 184.84 + 150.61 + 122.72$$

We can multiply both sides by r.

$$rS = 631.5 + 514.57 + 419.29 + 341.65 + 278.39 + 226.84 + 184.84 + 150.61 + 122.72 + 100$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(2) + 8(2)^2 + 8(2)^3 + \cdots + 8(2)^{93} + 8(2)^{94} + 8(2)^{95} + 8(2)^{96}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v347)

Question 1

Consider the partial geometric series represented below with first term $a = 705$, common ratio $r = \left(\frac{20}{47}\right)^{1/10}$, and $n = 10$ terms.

$$S = 705 + 647.27 + 594.26 + 545.59 + 500.91 + 459.89 + 422.23 + 387.65 + 355.91 + 326.76$$

We can multiply both sides by r.

$$rS = 647.27 + 594.26 + 545.59 + 500.91 + 459.89 + 422.23 + 387.65 + 355.91 + 326.76 + 300$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(4) + 3(4)^2 + 3(4)^3 + \cdots + 3(4)^{50} + 3(4)^{51} + 3(4)^{52} + 3(4)^{53}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v348)

Question 1

Consider the partial geometric series represented below with first term $a = 792$, common ratio $r = \left(\frac{2}{9}\right)^{1/10}$, and $n = 10$ terms.

$$S = 792 + 681.4 + 586.25 + 504.38 + 433.95 + 373.35 + 321.22 + 276.36 + 237.77 + 204.57$$

We can multiply both sides by r.

$$rS = 681.4 + 586.25 + 504.38 + 433.95 + 373.35 + 321.22 + 276.36 + 237.77 + 204.57 + 176$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(8) + 5(8)^2 + 5(8)^3 + \cdots + 5(8)^{79} + 5(8)^{80} + 5(8)^{81} + 5(8)^{82}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v349)

Question 1

Consider the partial geometric series represented below with first term $a = 720$, common ratio $r = \left(\frac{49}{72}\right)^{1/10}$, and $n = 10$ terms.

$$S = 720 + 692.82 + 666.66 + 641.49 + 617.27 + 593.97 + 571.55 + 549.97 + 529.2 + 509.23$$

We can multiply both sides by r.

$$rS = 692.82 + 666.66 + 641.49 + 617.27 + 593.97 + 571.55 + 549.97 + 529.2 + 509.23 + 490$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(8) + 6(8)^2 + 6(8)^3 + \cdots + 6(8)^{55} + 6(8)^{56} + 6(8)^{57} + 6(8)^{58}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v350)

Question 1

Consider the partial geometric series represented below with first term $a = 703$, common ratio $r = \left(\frac{30}{37}\right)^{1/10}$, and $n = 10$ terms.

$$S = 703 + 688.41 + 674.12 + 660.13 + 646.43 + 633.02 + 619.88 + 607.01 + 594.42 + 582.08$$

We can multiply both sides by r.

$$rS = 688.41 + 674.12 + 660.13 + 646.43 + 633.02 + 619.88 + 607.01 + 594.42 + 582.08 + 570$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(2) + 8(2)^2 + 8(2)^3 + \cdots + 8(2)^{80} + 8(2)^{81} + 8(2)^{82} + 8(2)^{83}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v351)

Question 1

Consider the partial geometric series represented below with first term $a = 468$, common ratio $r = \left(\frac{7}{9}\right)^{1/10}$, and $n = 10$ terms.

$$S = 468 + 456.39 + 445.06 + 434.01 + 423.24 + 412.74 + 402.49 + 392.5 + 382.76 + 373.26$$

We can multiply both sides by r.

$$rS = 456.39 + 445.06 + 434.01 + 423.24 + 412.74 + 402.49 + 392.5 + 382.76 + 373.26 + 364$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(2) + 8(2)^2 + 8(2)^3 + \cdots + 8(2)^{49} + 8(2)^{50} + 8(2)^{51} + 8(2)^{52}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v352)

Question 1

Consider the partial geometric series represented below with first term $a = 828$, common ratio $r = \left(\frac{13}{23}\right)^{1/10}$, and $n = 10$ terms.

$$S = 828 + 782.08 + 738.71 + 697.74 + 659.05 + 622.5 + 587.98 + 555.37 + 524.57 + 495.48$$

We can multiply both sides by r.

$$rS = 782.08 + 738.71 + 697.74 + 659.05 + 622.5 + 587.98 + 555.37 + 524.57 + 495.48 + 468$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(6) + 3(6)^2 + 3(6)^3 + \cdots + 3(6)^{73} + 3(6)^{74} + 3(6)^{75} + 3(6)^{76}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v353)

Question 1

Consider the partial geometric series represented below with first term $a = 605$, common ratio $r = \left(\frac{34}{55}\right)^{1/10}$, and $n = 10$ terms.

$$S = 605 + 576.59 + 549.51 + 523.71 + 499.12 + 475.68 + 453.34 + 432.05 + 411.76 + 392.43$$

We can multiply both sides by r.

$$rS = 576.59 + 549.51 + 523.71 + 499.12 + 475.68 + 453.34 + 432.05 + 411.76 + 392.43 + 374$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(4) + 8(4)^2 + 8(4)^3 + \cdots + 8(4)^{47} + 8(4)^{48} + 8(4)^{49} + 8(4)^{50}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v354)

Question 1

Consider the partial geometric series represented below with first term $a = 646$, common ratio $r = \left(\frac{12}{17}\right)^{1/10}$, and $n = 10$ terms.

$$S = 646 + 623.89 + 602.53 + 581.91 + 561.99 + 542.75 + 524.17 + 506.23 + 488.9 + 472.16$$

We can multiply both sides by r.

$$rS = 623.89 + 602.53 + 581.91 + 561.99 + 542.75 + 524.17 + 506.23 + 488.9 + 472.16 + 456$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(6) + 7(6)^2 + 7(6)^3 + \cdots + 7(6)^{90} + 7(6)^{91} + 7(6)^{92} + 7(6)^{93}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v355)

Question 1

Consider the partial geometric series represented below with first term $a = 680$, common ratio $r = \left(\frac{58}{85}\right)^{1/10}$, and $n = 10$ terms.

$$S = 680 + 654.5 + 629.96 + 606.33 + 583.6 + 561.71 + 540.65 + 520.37 + 500.86 + 482.08$$

We can multiply both sides by r.

$$rS = 654.5 + 629.96 + 606.33 + 583.6 + 561.71 + 540.65 + 520.37 + 500.86 + 482.08 + 464$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(4) + 6(4)^2 + 6(4)^3 + \cdots + 6(4)^{94} + 6(4)^{95} + 6(4)^{96} + 6(4)^{97}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v356)

Question 1

Consider the partial geometric series represented below with first term $a = 837$, common ratio $r = \left(\frac{1}{3}\right)^{1/10}$, and $n = 10$ terms.

$$S = 837 + 749.92 + 671.89 + 601.99 + 539.36 + 483.24 + 432.96 + 387.92 + 347.56 + 311.4$$

We can multiply both sides by r.

$$rS = 749.92 + 671.89 + 601.99 + 539.36 + 483.24 + 432.96 + 387.92 + 347.56 + 311.4 + 279$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(3) + 6(3)^2 + 6(3)^3 + \cdots + 6(3)^{71} + 6(3)^{72} + 6(3)^{73} + 6(3)^{74}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v357)

Question 1

Consider the partial geometric series represented below with first term $a = 946$, common ratio $r = \left(\frac{75}{86}\right)^{1/10}$, and $n = 10$ terms.

$$S = 946 + 933.14 + 920.46 + 907.95 + 895.6 + 883.43 + 871.42 + 859.58 + 847.89 + 836.37$$

We can multiply both sides by r.

$$rS = 933.14 + 920.46 + 907.95 + 895.6 + 883.43 + 871.42 + 859.58 + 847.89 + 836.37 + 825$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(2) + 4(2)^2 + 4(2)^3 + \cdots + 4(2)^{80} + 4(2)^{81} + 4(2)^{82} + 4(2)^{83}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v358)

Question 1

Consider the partial geometric series represented below with first term $a = 711$, common ratio $r = \left(\frac{64}{79}\right)^{1/10}$, and $n = 10$ terms.

$$S = 711 + 696.19 + 681.68 + 667.48 + 653.57 + 639.95 + 626.62 + 613.56 + 600.78 + 588.26$$

We can multiply both sides by r.

$$rS = 696.19 + 681.68 + 667.48 + 653.57 + 639.95 + 626.62 + 613.56 + 600.78 + 588.26 + 576$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(2) + 8(2)^2 + 8(2)^3 + \cdots + 8(2)^{72} + 8(2)^{73} + 8(2)^{74} + 8(2)^{75}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v359)

Question 1

Consider the partial geometric series represented below with first term $a = 410$, common ratio $r = \left(\frac{27}{82}\right)^{1/10}$, and $n = 10$ terms.

$$S = 410 + 366.89 + 328.32 + 293.8 + 262.91 + 235.27 + 210.53 + 188.39 + 168.59 + 150.86$$

We can multiply both sides by r.

$$rS = 366.89 + 328.32 + 293.8 + 262.91 + 235.27 + 210.53 + 188.39 + 168.59 + 150.86 + 135$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(5) + 3(5)^2 + 3(5)^3 + \cdots + 3(5)^{64} + 3(5)^{65} + 3(5)^{66} + 3(5)^{67}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v360)

Question 1

Consider the partial geometric series represented below with first term $a = 917$, common ratio $r = \left(\frac{3}{7}\right)^{1/10}$, and $n = 10$ terms.

$$S = 917 + 842.5 + 774.06 + 711.17 + 653.4 + 600.32 + 551.55 + 506.74 + 465.57 + 427.75$$

We can multiply both sides by r.

$$rS = 842.5 + 774.06 + 711.17 + 653.4 + 600.32 + 551.55 + 506.74 + 465.57 + 427.75 + 393$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(8) + 6(8)^2 + 6(8)^3 + \cdots + 6(8)^{47} + 6(8)^{48} + 6(8)^{49} + 6(8)^{50}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v361)

Question 1

Consider the partial geometric series represented below with first term $a = 792$, common ratio $r = \left(\frac{17}{22}\right)^{1/10}$, and $n = 10$ terms.

$$S = 792 + 771.84 + 752.19 + 733.05 + 714.39 + 696.21 + 678.49 + 661.22 + 644.39 + 627.98$$

We can multiply both sides by r.

$$rS = 771.84 + 752.19 + 733.05 + 714.39 + 696.21 + 678.49 + 661.22 + 644.39 + 627.98 + 612$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(3) + 5(3)^2 + 5(3)^3 + \cdots + 5(3)^{94} + 5(3)^{95} + 5(3)^{96} + 5(3)^{97}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v362)

Question 1

Consider the partial geometric series represented below with first term $a = 364$, common ratio $r = \left(\frac{37}{52}\right)^{1/10}$, and $n = 10$ terms.

$$S = 364 + 351.82 + 340.05 + 328.67 + 317.67 + 307.04 + 296.77 + 286.84 + 277.24 + 267.97$$

We can multiply both sides by r.

$$rS = 351.82 + 340.05 + 328.67 + 317.67 + 307.04 + 296.77 + 286.84 + 277.24 + 267.97 + 259$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(7) + 2(7)^2 + 2(7)^3 + \cdots + 2(7)^{68} + 2(7)^{69} + 2(7)^{70} + 2(7)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v363)

Question 1

Consider the partial geometric series represented below with first term $a = 812$, common ratio $r = \left(\frac{15}{58}\right)^{1/10}$, and $n = 10$ terms.

$$S = 812 + 709.29 + 619.57 + 541.2 + 472.74 + 412.94 + 360.71 + 315.08 + 275.22 + 240.41$$

We can multiply both sides by r.

$$rS = 709.29 + 619.57 + 541.2 + 472.74 + 412.94 + 360.71 + 315.08 + 275.22 + 240.41 + 210$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(4) + 3(4)^2 + 3(4)^3 + \cdots + 3(4)^{89} + 3(4)^{90} + 3(4)^{91} + 3(4)^{92}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v364)

Question 1

Consider the partial geometric series represented below with first term $a = 372$, common ratio $r = \left(\frac{32}{93}\right)^{1/10}$, and $n = 10$ terms.

$$S = 372 + 334.36 + 300.52 + 270.11 + 242.78 + 218.21 + 196.13 + 176.28 + 158.44 + 142.41$$

We can multiply both sides by r.

$$rS = 334.36 + 300.52 + 270.11 + 242.78 + 218.21 + 196.13 + 176.28 + 158.44 + 142.41 + 128$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(5) + 8(5)^2 + 8(5)^3 + \cdots + 8(5)^{85} + 8(5)^{86} + 8(5)^{87} + 8(5)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v365)

Question 1

Consider the partial geometric series represented below with first term $a = 400$, common ratio $r = \left(\frac{13}{40}\right)^{1/10}$, and $n = 10$ terms.

$$S = 400 + 357.48 + 319.47 + 285.51 + 255.16 + 228.04 + 203.79 + 182.13 + 162.77 + 145.46$$

We can multiply both sides by r.

$$rS = 357.48 + 319.47 + 285.51 + 255.16 + 228.04 + 203.79 + 182.13 + 162.77 + 145.46 + 130$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(5) + 2(5)^2 + 2(5)^3 + \cdots + 2(5)^{60} + 2(5)^{61} + 2(5)^{62} + 2(5)^{63}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v366)

Question 1

Consider the partial geometric series represented below with first term $a = 400$, common ratio $r = \left(\frac{13}{50}\right)^{1/10}$, and $n = 10$ terms.

$$S = 400 + 349.59 + 305.53 + 267.03 + 233.37 + 203.96 + 178.26 + 155.79 + 136.16 + 119$$

We can multiply both sides by r.

$$rS = 349.59 + 305.53 + 267.03 + 233.37 + 203.96 + 178.26 + 155.79 + 136.16 + 119 + 104$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(4) + 2(4)^2 + 2(4)^3 + \cdots + 2(4)^{50} + 2(4)^{51} + 2(4)^{52} + 2(4)^{53}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v367)

Question 1

Consider the partial geometric series represented below with first term $a = 518$, common ratio $r = \left(\frac{3}{7}\right)^{1/10}$, and $n = 10$ terms.

$$S = 518 + 475.92 + 437.25 + 401.73 + 369.1 + 339.11 + 311.56 + 286.25 + 263 + 241.63$$

We can multiply both sides by r.

$$rS = 475.92 + 437.25 + 401.73 + 369.1 + 339.11 + 311.56 + 286.25 + 263 + 241.63 + 222$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(2) + 4(2)^2 + 4(2)^3 + \cdots + 4(2)^{73} + 4(2)^{74} + 4(2)^{75} + 4(2)^{76}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v368)

Question 1

Consider the partial geometric series represented below with first term $a = 990$, common ratio $r = \left(\frac{79}{99}\right)^{1/10}$, and $n = 10$ terms.

$$S = 990 + 967.91 + 946.31 + 925.19 + 904.55 + 884.36 + 864.63 + 845.34 + 826.47 + 808.03$$

We can multiply both sides by r.

$$rS = 967.91 + 946.31 + 925.19 + 904.55 + 884.36 + 864.63 + 845.34 + 826.47 + 808.03 + 790$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(6) + 5(6)^2 + 5(6)^3 + \cdots + 5(6)^{84} + 5(6)^{85} + 5(6)^{86} + 5(6)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v369)

Question 1

Consider the partial geometric series represented below with first term $a = 852$, common ratio $r = \left(\frac{1}{3}\right)^{1/10}$, and $n = 10$ terms.

$$S = 852 + 763.36 + 683.94 + 612.78 + 549.02 + 491.9 + 440.72 + 394.87 + 353.79 + 316.98$$

We can multiply both sides by r.

$$rS = 763.36 + 683.94 + 612.78 + 549.02 + 491.9 + 440.72 + 394.87 + 353.79 + 316.98 + 284$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(3) + 2(3)^2 + 2(3)^3 + \cdots + 2(3)^{91} + 2(3)^{92} + 2(3)^{93} + 2(3)^{94}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v370)

Question 1

Consider the partial geometric series represented below with first term $a = 702$, common ratio $r = \left(\frac{5}{26}\right)^{1/10}$, and $n = 10$ terms.

$$S = 702 + 595.3 + 504.82 + 428.09 + 363.02 + 307.85 + 261.06 + 221.38 + 187.73 + 159.2$$

We can multiply both sides by r.

$$rS = 595.3 + 504.82 + 428.09 + 363.02 + 307.85 + 261.06 + 221.38 + 187.73 + 159.2 + 135$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(7) + 6(7)^2 + 6(7)^3 + \cdots + 6(7)^{48} + 6(7)^{49} + 6(7)^{50} + 6(7)^{51}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v371)

Question 1

Consider the partial geometric series represented below with first term $a = 957$, common ratio $r = \left(\frac{16}{87}\right)^{1/10}$, and $n = 10$ terms.

$$S = 957 + 807.93 + 682.07 + 575.83 + 486.13 + 410.4 + 346.48 + 292.5 + 246.94 + 208.47$$

We can multiply both sides by r.

$$rS = 807.93 + 682.07 + 575.83 + 486.13 + 410.4 + 346.48 + 292.5 + 246.94 + 208.47 + 176$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(8) + 2(8)^2 + 2(8)^3 + \cdots + 2(8)^{84} + 2(8)^{85} + 2(8)^{86} + 2(8)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v372)

Question 1

Consider the partial geometric series represented below with first term $a = 376$, common ratio $r = \left(\frac{63}{94}\right)^{1/10}$, and $n = 10$ terms.

$$S = 376 + 361.25 + 347.08 + 333.47 + 320.39 + 307.82 + 295.74 + 284.14 + 273 + 262.29$$

We can multiply both sides by r.

$$rS = 361.25 + 347.08 + 333.47 + 320.39 + 307.82 + 295.74 + 284.14 + 273 + 262.29 + 252$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(8) + 2(8)^2 + 2(8)^3 + \cdots + 2(8)^{77} + 2(8)^{78} + 2(8)^{79} + 2(8)^{80}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v373)

Question 1

Consider the partial geometric series represented below with first term $a = 551$, common ratio $r = \left(\frac{10}{29}\right)^{1/10}$, and $n = 10$ terms.

$$S = 551 + 495.35 + 445.32 + 400.34 + 359.91 + 323.56 + 290.88 + 261.5 + 235.09 + 211.35$$

We can multiply both sides by r.

$$rS = 495.35 + 445.32 + 400.34 + 359.91 + 323.56 + 290.88 + 261.5 + 235.09 + 211.35 + 190$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(6) + 3(6)^2 + 3(6)^3 + \cdots + 3(6)^{61} + 3(6)^{62} + 3(6)^{63} + 3(6)^{64}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v374)

Question 1

Consider the partial geometric series represented below with first term $a = 531$, common ratio $r = \left(\frac{33}{59}\right)^{1/10}$, and $n = 10$ terms.

$$S = 531 + 501.03 + 472.74 + 446.06 + 420.88 + 397.12 + 374.71 + 353.56 + 333.6 + 314.77$$

We can multiply both sides by r.

$$rS = 501.03 + 472.74 + 446.06 + 420.88 + 397.12 + 374.71 + 353.56 + 333.6 + 314.77 + 297$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(8) + 6(8)^2 + 6(8)^3 + \cdots + 6(8)^{70} + 6(8)^{71} + 6(8)^{72} + 6(8)^{73}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v375)

Question 1

Consider the partial geometric series represented below with first term $a = 279$, common ratio $r = \left(\frac{46}{93}\right)^{1/10}$, and $n = 10$ terms.

$$S = 279 + 260.03 + 242.36 + 225.88 + 210.53 + 196.22 + 182.88 + 170.45 + 158.86 + 148.06$$

We can multiply both sides by r.

$$rS = 260.03 + 242.36 + 225.88 + 210.53 + 196.22 + 182.88 + 170.45 + 158.86 + 148.06 + 138$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(6) + 5(6)^2 + 5(6)^3 + \cdots + 5(6)^{76} + 5(6)^{77} + 5(6)^{78} + 5(6)^{79}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v376)

Question 1

Consider the partial geometric series represented below with first term $a = 390$, common ratio $r = \left(\frac{4}{15}\right)^{1/10}$, and $n = 10$ terms.

$$S = 390 + 341.71 + 299.4 + 262.33 + 229.85 + 201.4 + 176.46 + 154.61 + 135.47 + 118.7$$

We can multiply both sides by r.

$$rS = 341.71 + 299.4 + 262.33 + 229.85 + 201.4 + 176.46 + 154.61 + 135.47 + 118.7 + 104$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(2) + 7(2)^2 + 7(2)^3 + \cdots + 7(2)^{66} + 7(2)^{67} + 7(2)^{68} + 7(2)^{69}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v377)

Question 1

Consider the partial geometric series represented below with first term $a = 644$, common ratio $r = \left(\frac{15}{92}\right)^{1/10}$, and $n = 10$ terms.

$$S = 644 + 537.18 + 448.07 + 373.75 + 311.75 + 260.04 + 216.9 + 180.92 + 150.91 + 125.88$$

We can multiply both sides by r.

$$rS = 537.18 + 448.07 + 373.75 + 311.75 + 260.04 + 216.9 + 180.92 + 150.91 + 125.88 + 105$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(5) + 8(5)^2 + 8(5)^3 + \cdots + 8(5)^{89} + 8(5)^{90} + 8(5)^{91} + 8(5)^{92}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v378)

Question 1

Consider the partial geometric series represented below with first term $a = 516$, common ratio $r = \left(\frac{16}{43}\right)^{1/10}$, and $n = 10$ terms.

$$S = 516 + 467.43 + 423.43 + 383.57 + 347.46 + 314.76 + 285.13 + 258.29 + 233.98 + 211.95$$

We can multiply both sides by r.

$$rS = 467.43 + 423.43 + 383.57 + 347.46 + 314.76 + 285.13 + 258.29 + 233.98 + 211.95 + 192$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(2) + 5(2)^2 + 5(2)^3 + \cdots + 5(2)^{67} + 5(2)^{68} + 5(2)^{69} + 5(2)^{70}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v379)

Question 1

Consider the partial geometric series represented below with first term $a = 639$, common ratio $r = \left(\frac{50}{71}\right)^{1/10}$, and $n = 10$ terms.

$$S = 639 + 616.98 + 595.72 + 575.19 + 555.37 + 536.24 + 517.76 + 499.92 + 482.69 + 466.06$$

We can multiply both sides by r.

$$rS = 616.98 + 595.72 + 575.19 + 555.37 + 536.24 + 517.76 + 499.92 + 482.69 + 466.06 + 450$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(5) + 8(5)^2 + 8(5)^3 + \cdots + 8(5)^{84} + 8(5)^{85} + 8(5)^{86} + 8(5)^{87}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v380)

Question 1

Consider the partial geometric series represented below with first term $a = 806$, common ratio $r = \left(\frac{11}{62}\right)^{1/10}$, and $n = 10$ terms.

$$S = 806 + 678.01 + 570.34 + 479.77 + 403.59 + 339.5 + 285.59 + 240.23 + 202.09 + 169.99$$

We can multiply both sides by r.

$$rS = 678.01 + 570.34 + 479.77 + 403.59 + 339.5 + 285.59 + 240.23 + 202.09 + 169.99 + 143$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(6) + 7(6)^2 + 7(6)^3 + \cdots + 7(6)^{77} + 7(6)^{78} + 7(6)^{79} + 7(6)^{80}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v381)

Question 1

Consider the partial geometric series represented below with first term $a = 392$, common ratio $r = \left(\frac{25}{56}\right)^{1/10}$, and $n = 10$ terms.

$$S = 392 + 361.63 + 333.61 + 307.76 + 283.91 + 261.92 + 241.62 + 222.9 + 205.63 + 189.7$$

We can multiply both sides by r.

$$rS = 361.63 + 333.61 + 307.76 + 283.91 + 261.92 + 241.62 + 222.9 + 205.63 + 189.7 + 175$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(2) + 6(2)^2 + 6(2)^3 + \cdots + 6(2)^{53} + 6(2)^{54} + 6(2)^{55} + 6(2)^{56}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v382)

Question 1

Consider the partial geometric series represented below with first term $a = 360$, common ratio $r = \left(\frac{49}{90}\right)^{1/10}$, and $n = 10$ terms.

$$S = 360 + 338.76 + 318.78 + 299.98 + 282.28 + 265.63 + 249.96 + 235.22 + 221.34 + 208.29$$

We can multiply both sides by r.

$$rS = 338.76 + 318.78 + 299.98 + 282.28 + 265.63 + 249.96 + 235.22 + 221.34 + 208.29 + 196$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(2) + 6(2)^2 + 6(2)^3 + \cdots + 6(2)^{68} + 6(2)^{69} + 6(2)^{70} + 6(2)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v383)

Question 1

Consider the partial geometric series represented below with first term $a = 536$, common ratio $r = \left(\frac{3}{8}\right)^{1/10}$, and $n = 10$ terms.

$$S = 536 + 485.92 + 440.53 + 399.37 + 362.06 + 328.23 + 297.57 + 269.77 + 244.56 + 221.71$$

We can multiply both sides by r.

$$rS = 485.92 + 440.53 + 399.37 + 362.06 + 328.23 + 297.57 + 269.77 + 244.56 + 221.71 + 201$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(6) + 2(6)^2 + 2(6)^3 + \cdots + 2(6)^{68} + 2(6)^{69} + 2(6)^{70} + 2(6)^{71}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v384)

Question 1

Consider the partial geometric series represented below with first term $a = 765$, common ratio $r = \left(\frac{4}{9}\right)^{1/10}$, and $n = 10$ terms.

$$S = 765 + 705.41 + 650.47 + 599.8 + 553.08 + 510 + 470.28 + 433.64 + 399.87 + 368.72$$

We can multiply both sides by r.

$$rS = 705.41 + 650.47 + 599.8 + 553.08 + 510 + 470.28 + 433.64 + 399.87 + 368.72 + 340$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(2) + 5(2)^2 + 5(2)^3 + \cdots + 5(2)^{88} + 5(2)^{89} + 5(2)^{90} + 5(2)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v385)

Question 1

Consider the partial geometric series represented below with first term $a = 744$, common ratio $r = \left(\frac{61}{93}\right)^{1/10}$, and $n = 10$ terms.

$$S = 744 + 713.28 + 683.82 + 655.58 + 628.51 + 602.55 + 577.67 + 553.82 + 530.95 + 509.02$$

We can multiply both sides by r.

$$rS = 713.28 + 683.82 + 655.58 + 628.51 + 602.55 + 577.67 + 553.82 + 530.95 + 509.02 + 488$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(8) + 4(8)^2 + 4(8)^3 + \cdots + 4(8)^{85} + 4(8)^{86} + 4(8)^{87} + 4(8)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v386)

Question 1

Consider the partial geometric series represented below with first term $a = 846$, common ratio $r = \left(\frac{34}{47}\right)^{1/10}$, and $n = 10$ terms.

$$S = 846 + 819.05 + 792.95 + 767.69 + 743.23 + 719.55 + 696.62 + 674.43 + 652.94 + 632.14$$

We can multiply both sides by r.

$$rS = 819.05 + 792.95 + 767.69 + 743.23 + 719.55 + 696.62 + 674.43 + 652.94 + 632.14 + 612$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(6) + 2(6)^2 + 2(6)^3 + \cdots + 2(6)^{88} + 2(6)^{89} + 2(6)^{90} + 2(6)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v387)

Question 1

Consider the partial geometric series represented below with first term $a = 980$, common ratio $r = \left(\frac{11}{28}\right)^{1/10}$, and $n = 10$ terms.

$$S = 980 + 892.58 + 812.97 + 740.45 + 674.4 + 614.25 + 559.46 + 509.55 + 464.1 + 422.7$$

We can multiply both sides by r.

$$rS = 892.58 + 812.97 + 740.45 + 674.4 + 614.25 + 559.46 + 509.55 + 464.1 + 422.7 + 385$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(7) + 2(7)^2 + 2(7)^3 + \cdots + 2(7)^{72} + 2(7)^{73} + 2(7)^{74} + 2(7)^{75}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v388)

Question 1

Consider the partial geometric series represented below with first term $a = 728$, common ratio $r = \left(\frac{76}{91}\right)^{1/10}$, and $n = 10$ terms.

$$S = 728 + 715 + 702.24 + 689.7 + 677.39 + 665.3 + 653.42 + 641.76 + 630.3 + 619.05$$

We can multiply both sides by r.

$$rS = 715 + 702.24 + 689.7 + 677.39 + 665.3 + 653.42 + 641.76 + 630.3 + 619.05 + 608$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(8) + 4(8)^2 + 4(8)^3 + \cdots + 4(8)^{85} + 4(8)^{86} + 4(8)^{87} + 4(8)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v389)

Question 1

Consider the partial geometric series represented below with first term $a = 820$, common ratio $r = \left(\frac{13}{82}\right)^{1/10}$, and $n = 10$ terms.

$$S = 820 + 682.07 + 567.34 + 471.9 + 392.52 + 326.5 + 271.58 + 225.89 + 187.9 + 156.29$$

We can multiply both sides by r.

$$rS = 682.07 + 567.34 + 471.9 + 392.52 + 326.5 + 271.58 + 225.89 + 187.9 + 156.29 + 130$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(4) + 7(4)^2 + 7(4)^3 + \cdots + 7(4)^{74} + 7(4)^{75} + 7(4)^{76} + 7(4)^{77}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v390)

Question 1

Consider the partial geometric series represented below with first term $a = 476$, common ratio $r = \left(\frac{12}{17}\right)^{1/10}$, and $n = 10$ terms.

$$S = 476 + 459.71 + 443.97 + 428.77 + 414.09 + 399.92 + 386.23 + 373.01 + 360.24 + 347.91$$

We can multiply both sides by r.

$$rS = 459.71 + 443.97 + 428.77 + 414.09 + 399.92 + 386.23 + 373.01 + 360.24 + 347.91 + 336$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(2) + 4(2)^2 + 4(2)^3 + \cdots + 4(2)^{85} + 4(2)^{86} + 4(2)^{87} + 4(2)^{88}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v391)

Question 1

Consider the partial geometric series represented below with first term $a = 402$, common ratio $r = \left(\frac{27}{67}\right)^{1/10}$, and $n = 10$ terms.

$$S = 402 + 367.08 + 335.18 + 306.06 + 279.47 + 255.19 + 233.02 + 212.78 + 194.29 + 177.41$$

We can multiply both sides by r.

$$rS = 367.08 + 335.18 + 306.06 + 279.47 + 255.19 + 233.02 + 212.78 + 194.29 + 177.41 + 162$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(5) + 4(5)^2 + 4(5)^3 + \cdots + 4(5)^{49} + 4(5)^{50} + 4(5)^{51} + 4(5)^{52}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v392)

Question 1

Consider the partial geometric series represented below with first term $a = 340$, common ratio $r = \left(\frac{41}{85}\right)^{1/10}$, and $n = 10$ terms.

$$S = 340 + 316.09 + 293.87 + 273.2 + 253.99 + 236.14 + 219.53 + 204.1 + 189.75 + 176.4$$

We can multiply both sides by r.

$$rS = 316.09 + 293.87 + 273.2 + 253.99 + 236.14 + 219.53 + 204.1 + 189.75 + 176.4 + 164$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 8 + 8(7) + 8(7)^2 + 8(7)^3 + \cdots + 8(7)^{54} + 8(7)^{55} + 8(7)^{56} + 8(7)^{57}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v393)

Question 1

Consider the partial geometric series represented below with first term $a = 930$, common ratio $r = \left(\frac{2}{15}\right)^{1/10}$, and $n = 10$ terms.

$$S = 930 + 760.29 + 621.54 + 508.12 + 415.39 + 339.59 + 277.62 + 226.96 + 185.54 + 151.68$$

We can multiply both sides by r.

$$rS = 760.29 + 621.54 + 508.12 + 415.39 + 339.59 + 277.62 + 226.96 + 185.54 + 151.68 + 124$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 3 + 3(8) + 3(8)^2 + 3(8)^3 + \cdots + 3(8)^{53} + 3(8)^{54} + 3(8)^{55} + 3(8)^{56}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v394)

Question 1

Consider the partial geometric series represented below with first term $a = 624$, common ratio $r = \left(\frac{43}{52}\right)^{1/10}$, and $n = 10$ terms.

$$S = 624 + 612.25 + 600.73 + 589.42 + 578.32 + 567.44 + 556.75 + 546.27 + 535.99 + 525.9$$

We can multiply both sides by r.

$$rS = 612.25 + 600.73 + 589.42 + 578.32 + 567.44 + 556.75 + 546.27 + 535.99 + 525.9 + 516$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(6) + 5(6)^2 + 5(6)^3 + \cdots + 5(6)^{88} + 5(6)^{89} + 5(6)^{90} + 5(6)^{91}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v395)

Question 1

Consider the partial geometric series represented below with first term $a = 896$, common ratio $r = \left(\frac{5}{32}\right)^{1/10}$, and $n = 10$ terms.

$$S = 896 + 744.2 + 618.12 + 513.4 + 426.42 + 354.18 + 294.17 + 244.33 + 202.94 + 168.56$$

We can multiply both sides by r.

$$rS = 744.2 + 618.12 + 513.4 + 426.42 + 354.18 + 294.17 + 244.33 + 202.94 + 168.56 + 140$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 5 + 5(4) + 5(4)^2 + 5(4)^3 + \cdots + 5(4)^{78} + 5(4)^{79} + 5(4)^{80} + 5(4)^{81}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v396)

Question 1

Consider the partial geometric series represented below with first term $a = 728$, common ratio $r = \left(\frac{43}{56}\right)^{1/10}$, and $n = 10$ terms.

$$S = 728 + 709.02 + 690.54 + 672.54 + 655 + 637.93 + 621.3 + 605.1 + 589.33 + 573.96$$

We can multiply both sides by r.

$$rS = 709.02 + 690.54 + 672.54 + 655 + 637.93 + 621.3 + 605.1 + 589.33 + 573.96 + 559$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(8) + 7(8)^2 + 7(8)^3 + \cdots + 7(8)^{80} + 7(8)^{81} + 7(8)^{82} + 7(8)^{83}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v397)

Question 1

Consider the partial geometric series represented below with first term $a = 750$, common ratio $r = \left(\frac{17}{25}\right)^{1/10}$, and $n = 10$ terms.

$$S = 750 + 721.63 + 694.33 + 668.06 + 642.78 + 618.47 + 595.07 + 572.56 + 550.89 + 530.05$$

We can multiply both sides by r.

$$rS = 721.63 + 694.33 + 668.06 + 642.78 + 618.47 + 595.07 + 572.56 + 550.89 + 530.05 + 510$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 6 + 6(4) + 6(4)^2 + 6(4)^3 + \cdots + 6(4)^{74} + 6(4)^{75} + 6(4)^{76} + 6(4)^{77}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v398)

Question 1

Consider the partial geometric series represented below with first term $a = 779$, common ratio $r = \left(\frac{13}{19}\right)^{1/10}$, and $n = 10$ terms.

$$S = 779 + 749.99 + 722.06 + 695.18 + 669.29 + 644.37 + 620.37 + 597.27 + 575.03 + 553.62$$

We can multiply both sides by r.

$$rS = 749.99 + 722.06 + 695.18 + 669.29 + 644.37 + 620.37 + 597.27 + 575.03 + 553.62 + 533$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 2 + 2(3) + 2(3)^2 + 2(3)^3 + \cdots + 2(3)^{51} + 2(3)^{52} + 2(3)^{53} + 2(3)^{54}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v399)

Question 1

Consider the partial geometric series represented below with first term $a = 297$, common ratio $r = \left(\frac{16}{27}\right)^{1/10}$, and $n = 10$ terms.

$$S = 297 + 281.86 + 267.49 + 253.85 + 240.91 + 228.63 + 216.98 + 205.91 + 195.42 + 185.45$$

We can multiply both sides by r.

$$rS = 281.86 + 267.49 + 253.85 + 240.91 + 228.63 + 216.98 + 205.91 + 195.42 + 185.45 + 176$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 4 + 4(3) + 4(3)^2 + 4(3)^3 + \cdots + 4(3)^{67} + 4(3)^{68} + 4(3)^{69} + 4(3)^{70}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.

Name: Date:

s17 Geometric Series Exam (EXAM v400)

Question 1

Consider the partial geometric series represented below with first term $a = 876$, common ratio $r = \left(\frac{25}{73}\right)^{1/10}$, and $n = 10$ terms.

$$S = 876 + 786.98 + 707.01 + 635.17 + 570.63 + 512.64 + 460.55 + 413.75 + 371.7 + 333.93$$

We can multiply both sides by r.

$$rS = 786.98 + 707.01 + 635.17 + 570.63 + 512.64 + 460.55 + 413.75 + 371.7 + 333.93 + 300$$

What is the value of $S - rS$?

Question 2

Consider the geometric series shown below, using ellipsis notation to indicate a continuation of the pattern without writing every term.

$$S = 7 + 7(5) + 7(5)^2 + 7(5)^3 + \cdots + 7(5)^{65} + 7(5)^{66} + 7(5)^{67} + 7(5)^{68}$$

Identify the initial term, the common ratio, and the number of terms.

Question 3

Write a proof for the partial geometric series formula.

a. Define the variables.
b. Write the sum using variables and ellipsis notation. You can implicitly assume the number of terms is more than the number of terms you choose to write.
c. Using annotated algebraic manipulation, produce the partial geometric series formula.